

WEST Search History

DATE: Friday, March 14, 2003

Set Name Query

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result set

DB=JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ

L14 (ablat\$ or fluorin\$) and L12

20 L14

L13 (ablat\$ or fluor\$)L12

0 L13

L12 chamber same clean\$ same laser

225 L12

DB=DWPI; PLUR=YES; OP=ADJ

L11 316835 or 606648 or 771638

17 L11

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ

L10 (4699689| 5223112| 5478401| 5480492| 5531857| 5863327)! [pn]

12 L10

L9 L8 and chamber

19 L9

L8 markoff and laser

73 L8

L7 L2 and ((134/\$)! .CCLS.)

40 L7

L6 L2and ((134/\$)! .CCLS.)

0 L6

L5 L4 and deposits

118 L5

L4 L3 and (wafer or substrate or semiconductor)

310 L4

L3 L2 same gas

467 L3

L2 laser same chamber same clean\$

1003 L2

DB=USPT; PLUR=YES; OP=ADJ

L1 ((438/905)! .CCLS.) and laser

13 L1

END OF SEARCH HISTORY

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L14: Entry 2 of 20

File: JPAB

Dec 26, 2001

PUB-NO: JP02001358386A
DOCUMENT-IDENTIFIER: JP 2001358386 A
TITLE: LASER DISCHARGE CHAMBER PASSIVATION BY PLASMA

PUBN-DATE: December 26, 2001

INVENTOR-INFORMATION:

NAME

COUNTRY

WATSON, TOM A

SANDSTROM, RICHARD L

MORTON, RICHARD G

WEEKS, ROBERT E

QUITTER, JOHN P

LEWIS, MARK R

ASSIGNEE-INFORMATION:

NAME

COUNTRY

CYMER INC

APPL-NO: JP2001111974

APPL-DATE: March 6, 2001

INT-CL (IPC): H01 S 3/03; H01 L 21/027

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a method and device for cleaning and passivating a laser discharge chamber by plasma.

SOLUTION: Oxygen-based plasma is formed at an external plasma source by guiding and applying a high-frequency signal to a gas containing oxygen. The oxygen-based plasma is drawn into a laser discharge chamber, reacts with a contaminant, and cleans the internal surface. After cleaning, fluorine-based plasma is formed at the plasma source, and is drawn into the laser discharge chamber to passivate the inner surface. In another embodiment, the oxygen-based plasma and fluorine-based plasma are formed in the laser discharge chamber by applying a high-frequency signal to a laser discharge chamber electrode, thus exciting the gas containing oxygen and that containing fluorine.

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L14: Entry 11 of 20

File: DWPI

Sep 13, 2001

DERWENT-ACC-NO: 2001-625866

DERWENT-WEEK: 200206

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TITLE: Passivation of laser discharge chamber involves reacting fluorine-based plasma with internal surfaces of chamber

INVENTOR: LEWIS, M R; MORTON, R G ; QUITTER, J P ; SANDSTROM, R L ; WATSON, T A ; WEEKS, R E

PATENT-ASSIGNEE:

ASSIGNEE

CODE

CYMER INC

CYMEN

PRIORITY-DATA: 2000US-0518970 (March 6, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200166272 A1	September 13, 2001	E	021	B08B007/00
JP 2001358386 A	December 26, 2001		032	H01S003/03
AU 200139820 A	September 17, 2001		000	B08B007/00

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200166272A1	February 21, 2001	2001WO-US05628	
JP2001358386A	March 6, 2001	2001JP-0111974	
AU 200139820A	February 21, 2001	2001AU-0039820	
AU 200139820A		WO 200166272	Based on

INT-CL (IPC): B08 B 7/00; B08 B 7/04; H01 L 21/027; H01 S 3/03; H01 S 3/036

ABSTRACTED-PUB-NO: WO 200166272A

BASIC-ABSTRACT:

NOVELTY - A laser discharge chamber is passivated by forming a fluorine-based plasma from gas or gases comprising a fluorine-containing gas; and reacting the fluorine-based plasma with internal surfaces of the laser discharge chamber.

DETAILED DESCRIPTION – An INDEPENDENT CLAIM is also included for a laser discharge chamber passivating apparatus comprising a source of gas or gases including a fluorine-containing gas and coupled to the chamber; a source of a radio frequency (RF) signal; and an antenna electrically coupled to the source of RF signal which is applied to the gases to form a plasma.

USE – For passivating a laser discharge chamber.

ADVANTAGE – The invention allows plasma cleaning and passivation of laser discharge chambers to be safer, more efficient and more effective than conventional thermal cleaning and passivation processes. The method does not require the use of dangerous fluorine gas. It is also much less time-consuming.

DESCRIPTION OF DRAWING(S) – The figure shows an apparatus that includes an external plasma source for cleaning and passivating a laser discharge chamber.

CHOSEN-DRAWING: Dwg.1 / 3

TITLE-TERMS: PASSIVATION LASER DISCHARGE CHAMBER REACT FLUORINE BASED PLASMA INTERNAL SURFACE CHAMBER

DERWENT-CLASS: L03 P43 V08

CPI-CODES: L03-F02; L03-H04D;

EPI-CODES: V08-A01C; V08-A04B;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2001-186415

Non-CPI Secondary Accession Numbers: N2001-466554